MEDBRIEF

Diabetes Drugs and Eye Disease: These Protect, These Don't

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TOPLINE:

Glucagon-like peptide 1 receptor agonists (GLP-1 RAs) and fenofibrates are associated with a reduced risk for diabetic macular edema (DME) in patients with type 2 diabetes, while calcium channel blockers appear to increase the risk.

METHODOLOGY:

- Researchers conducted a retrospective analysis of electronic medical records from the TriNetX health research network to evaluate how systemic medications, such as GLP-1 RAs, fenofibrates, thiazolidinediones, and calcium channel blockers, influence the risk of developing DME in patients with type 2 diabetes.
- They included patients with a 5-year history of type 2 diabetes and an absence of DME at baseline.
- The treatment group included patients who initiated treatment with calcium channel blockers (n = 107,193), GLP-1 RAs (n = 76,583), thiazolidinediones (n = 25,657), or fenofibrates (n = 18,606) after a diagnosis of diabetes. The control group received none of these medications within 1 year of being diagnosed with the condition.
- The researchers used propensity score matching to balance baseline characteristics and comorbidities between both groups.
- The primary outcome was the incidence of diagnoses of DME within a 2-year follow-up period after the initiation of systemic medications.

TAKEAWAY:

- Patients treated with calcium channel blockers showed an increased risk for incident DME (hazard ratio [HR], 1.66; 95% CI, 1.54-1.78) compared with control individuals.
- Treatment with GLP-1 RAs was associated with a reduced risk for DME (HR, 0.77; 95% CI, 0.70-0.85), as was treatment with fenofibrates (HR, 0.83; 95% CI, 0.68-0.98).

- No significant difference in risk for DME was observed between patients taking thiazolidinediones and control individuals.

IN PRACTICE:

"We found a possible protective effect for GLP-1 RA medications and fenofibrate for DME and an adverse effect for calcium channel blockers with regard to the development of DME in patients" with type 2 diabetes, the authors of the study wrote.

"Our preliminary data suggests a *protective* effect with regard to GLP-1 RA drugs and the development of DME. Clinical studies examining a potential *therapeutic* effect of GLP-1 RA drugs on DME do seem warranted. A single orally administered drug could conceivably lower blood sugar, reduce weight, offer cardiovascular protection, and treat DME" in patients with type 2 diabetes, they added.

SOURCE:

The study was led by Jawad Muayad, BS, of the School of Medicine at Texas A&M University, in Houston. It was published online on December 5, 2024, in *Ophthalmology Retina*.

LIMITATIONS:

The study was retrospective in nature. It relied on electronic medical records for the diagnosis of DME instead of directly assessing retinal images or measuring retinal thickness. Moreover, patients on certain medications may have been monitored more closely, potentially influencing the likelihood of a diagnosis of DME being recorded.

DISCLOSURES:

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